



This 5-day course is specially designed to give a complete coverage on fundamentals of photovoltaic systems and modeling & control and issues related to grid integration. The course will also cover the forecasting of solar irradiance beforehand so that appropriate control action can be taken to meet the change in electricity supply while maintaining the system stability and power quality. It is expected that this course will be suitable for engineering professionals from academia, R&D organizations as well as industries.

Key Speakers

Prof. Bidyadhar Subudhi, NIT Rourkela
Prof. Pravat Kumar Ray, NIT Rourkela
Prof. S. Maity, NIT Rourkela
Prof. S.Samanta, NIT Rourkela
Prof. S.Mishra, IIT Delhi
Prof. S.Jain, NIT Warangal

Registration Form

1. Name: _____
2. Designation: _____
3. Specialization: _____
4. Department: _____
5. Organization: _____
6. Research/Teaching/Industry Experience: _____

7. Mailing Address: _____

- Phone: _____
- Email: _____
8. Accommodation required: YES / NO
9. Payment of Course Fee:
DD No. _____
Date: _____ for Rupees _____
On Bank _____
10. Signature: _____
11. Place and Date: _____

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

announces
a
Short Term Course

On

DESIGN AND CONTROL OF PHOTOVOLTAIC SYSTEMS

02 – 06 July, 2018



Co-ordinators

Prof. Bidyadhar Subudhi
Prof. Pravat Kumar Ray

Organized by

*Centre of Excellence on
Renewable Energy Systems*

DEPT. OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769008, ODISHA



Introduction

Design and control of PV grid-connected systems have become one of the most important applications of solar energy. The control strategy with MPPT plays a dominant role in providing high quality power and high efficiency conversion to electric grids. In principle, the MPPT controls the PV output to match with the load for all atmospheric conditions. So many current control techniques for three-phase voltage-source PWM converters have been developed. To meet the standard IEEE 929-2000 for utility interface of PV systems such as power quality, safety and protection functions, the current-controlled inverter is adapted to three-phase PV grid connected system.

The course focuses on a series of classes covering both the fundamentals and recent advances in grid integration of photovoltaic systems. One of the interesting features of the course is to provide hands-on sessions on how to successfully model and simulate using MATLAB and also in Hardware. Thus, these will supplement the theory sessions covered in the class room sessions.

Course Coverage

- Insolation, Insolation variation with time of day, Solar geometry, Atmospheric effects, Clearness index and Forecasting of solar irradiance
- Modeling of Photovoltaic system and MPPT algorithms
- Topologies of PV power systems
- Control problem in PV systems
- Design of new generation power converters for PV systems
- Grid integration issues
- Grid codes
- Simulations and Experimental verifications on laboratory prototypes

Venue

The course will be organized at the National Institute of Technology (NIT), Rourkela. It is one of the premier national level institutions for technical education in the country and is funded by the Government of India. It is situated at the eastern end of Rourkela steel city, beyond Sector-1 over an area of 262 hectares of land. NIT Rourkela has twenty one academic departments which offer B.Tech, M.Tech and PhD programs in various areas of engineering and technology. It has six centers of Excellence including two centers hosted by the Department of Electrical Engineering namely Centre of Excellence on Industrial Electronics & Robotics and Renewable Energy Systems. The Institute is a participant of the Technical Education Quality Improvement programme-III of Government of India.

Registration

The course fees given below in the form of demand draft drawn in favor of “Continuing Education, Rourkela” payable at SBI, NIT Branch, Rourkela (code - 2109) to be sent to the coordinator on or before 25th June, 2018. The course fee will cover expenses towards registration kit and lecture notes only. The number of seats is limited to 50. Therefore, interested faculty members should apply well within the scheduled time frame i.e. 25th June 2018.

Category	Registration Fee in INR
Faculty Members from Engineering Institutes	5000
Engineers from Industry	6000
Scientists from R&D Organizations	6000
Research Scholars	4000

Accommodation

Accommodation and food for participants shall be arranged in the Institute’s Guest House. The expenses towards these will be paid by the participant directly to the guest house.

Contact Us

Dr. Bidyadhar Subudhi
Coordinator

Professor, Dept. of Electrical
Engineering
National Institute of Technology
Rourkela – 769008, Orissa

Ph: 0661-2462416(O), 0661-2463416(R)
Email: bidyadhar@nitrrkl.ac.in,
bidyadharnitrkl@gmail.com